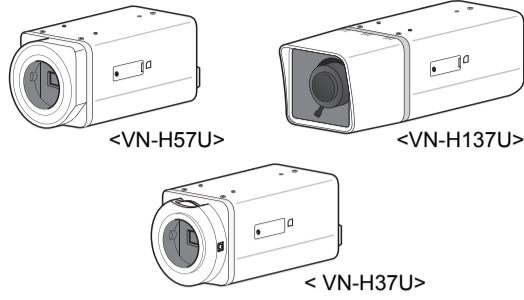


### Instructions (Installation)



Thank you for purchasing this product.  
Before operating this unit, please read the instructions carefully to ensure the best possible performance.

#### For Customer Use:

Enter below the Model No. which is located on the body.  
Retain this information for future reference.

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

The standard camera installation procedure can be found on the back side of this page. >>>>

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LST1230-001D

### Safety Precautions

The power rating is AC 24 V, 50/60 Hz/PoE (VN-H57U) or PoE (VN-H37U/VN-H137U). Use the correct voltage. Always use the AC 24 V power source that is insulated from the primary power supply. (VN-H57U)  
A level of supplied power that exceeds the ratings may result in failures, smoke or fire. If the camera breaks down, turn off the power and contact our service center immediately.  
If a level of power that exceeds the ratings is supplied, the internal components may be damaged even if no abnormalities are observed in the appearance and/or operation of the camera. Contact our service center immediately to arrange for an inspection (charged separately).

### Attachments and Accessories

Instructions .....	2
CD-ROM .....	1
WARRANTY CARD (For USA) .....	1

### Operating Precautions

#### Storage and Operating Environment

- This camera has been designed for indoor use. If you use it outdoors, install a housing.
- Do not install the camera in the following environments. Doing so may result in malfunctions or failure.
  - Hot or cold locations beyond ambient temperature range (-10 °C to 50 °C).
  - Locations beyond the allowable operating humidity range (20 %RH to 90 %RH) (no condensation allowed).
  - Near equipment that emits strong magnetic fields, such as transformers or motors.
  - Near equipment that emits radio waves, such as transceivers and mobile phones.
  - Locations in which excessive dust or sand exist.
  - Locations that are subject to vibration.
  - Locations prone to moisture such as sides of windows.
  - Locations that may contain steam or oil, such as kitchens.
  - Locations that are subject to radiation emissions, X-rays or corrosive gases.
  - Locations where chemicals are used, such as swimming pools.
- Use of this camera and cables connected to this camera at locations where strong electrical or magnetic waves are generated (e.g. near a radio, TV, transformer, monitor, etc.) may result in images being affected by noise interference or colors being changed.
- Do not install this camera at a location that traps heat. This camera discharges heat from the surface of the main unit. Do not install at a location that may trap heat, such as near the walls.

#### Handling Precautions

- Do not suspend yourself from this camera, shake it or hang objects over it.  
Applying excessive load may cause the camera to fall off and cause an accident.
- Do not stack devices on top of each other.  
Doing so may cause a malfunction or failure due to overheating or noise, or cause a fire.
- Do not block the vents.  
Inadequate heat ventilation may cause this camera to malfunction. Be sure not to block the vents around the camera.

#### Copyright Protection

- With the exception of the user being the copyright holder or when permission such as for duplication has been granted by the copyright holder, permission is required in principle to duplicate, modify or transmit copyrighted material.
- Unauthorized duplication, modification or transmission of copyrighted material may constitute a copyright infringement, and the user may be liable to pay compensation for damages. When using copyrighted material, be sure to check the license agreement or the copyrighted material thoroughly.
- When rights or rights holders are involved with regard to the targeted subject of duplication, permission may be required for shooting or using (processing) it. Be sure to check the licensing conditions thoroughly.
- Use of recorded materials without first gaining the prior consent of the author is forbidden under copyright law except in cases of personal use.

#### Disclaimer

- The motion detection feature is not a feature to prevent theft or fire. Our company shall not be liable for any loss or damage resulting from the use of this feature.
- We shall not be responsible for any loss or damage caused in the event of privacy invasion as a result of camera footage created by this product.

#### Maintenance

- Turn off the power before performing maintenance.
- Wipe using a soft cloth.  
Wiping with thinner or benzene may melt or tarnish its surface. For tough stains, wipe using a cloth that has been dipped into a neutral detergent diluted with water. Following that, wipe with a dry cloth.

#### Saving Energy

- If the camera is not going to be used for a long period of time, turn off the power or the system for safety reasons and to conserve energy.

#### Others

- This camera has a built-in AGC circuit. Setting AGC to "Mid" or "High" increases the sensitivity of a dark image, and the screen may appear grainy. This is not a malfunction.
- When this camera is used with the white balance set to "ATW" (Auto Tracking White Balance), the color tone of some objects may differ slightly from the actual color due to the principle of the automatic tracking white balance circuit. This is not a malfunction.
- The electric shutter of this camera is set to "1/30" by factory default. For regions with a commercial power frequency of 50 Hz, switch to the Flickerless mode during use under fluorescent lights (excluding inverter lighting equipment) to prevent flickers.
- When the electronic sensitivity enhancement feature is enabled, the screen may appear grainy and more white spots may appear because the sensitivity is increased. However, this is not a malfunction.
- If the power supply voltage is momentarily cut off or reduced due to lightning or the power supply to the air conditioner being turned on, the image may be disrupted or noise interference may occur.
- When using multicast, make use of an IGMPv2-compliant network switch.
- Some hubs/switches of products that are equipped with intelligent features may include a broadcast/multicast suppression function. If this function is enabled, viewing of multicast images on this camera may fail.
- When the Easy Day and Night or Day and Night is set to "Auto", the image becomes black and white in dark locations. As the sensitivity level is increased in this case, the screen may appear grainy and more white spots may appear. When switching between color and black-and-white images, the brighter area on the screen is emphasized, which may reduce the visibility. However, this is not a malfunction.
- It is recommended that shielded LAN cables be used to connect to this camera. The safety and reliability of this camera has been checked using shielded cables.
- Under halogen lamps, light bulbs and other light sources that emit strong infrared light, black objects may look almost purple in the recording. It is an inherent characteristic of this camera and not a defect. (VN-H137U)
- During viewing using the Built-in Viewer, the video and audio may appear out of sync. This is not a malfunction (VN-H57U).

### SAFETY PRECAUTIONS

#### FOR USA

These are general IMPORTANT SAFEGUARDS and certain items may not apply to all appliances.

#### IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water - for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.  
An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
11. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
12. Follow all warnings and instructions marked on the appliance.
13. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
14. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
15. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
16. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - a. When the power cord or plug is damaged or frayed.
  - b. If liquid has been spilled into the appliance.
  - c. If the appliance has been exposed to rain or water.
  - d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
  - e. If the appliance has been dropped or the cabinet has been damaged.
  - f. When the appliance exhibits a distinct change in performance - this indicates a need for service.
17. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
18. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### INFORMATION (FOR CANADA)

#### RENSEIGNEMENT (POUR CANADA)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la Class A est conforme à la norme NMB-003 du Canada.

Due to design modifications, data given in this instruction book are subject to possible change without prior notice.

#### WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**AVERTISSEMENT**  
POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

#### FOR EUROPE

#### WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

#### Dear Customer

This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.  
European representative of JVC KENWOOD Corporation is:  
JVC Technical Services Europe GmbH  
Postfach 10 05 04  
61145 Friedberg  
Germany

Sehr geehrter Kunde, sehr geehrte Kundin, dieses Gerät stimmt mit den gültigen europäischen Richtlinien und Normen bezüglich elektromagnetischer Verträglichkeit und elektrischer Sicherheit überein.  
Die europäische Vertretung für die JVC KENWOOD Corporation ist:  
JVC Technical Services Europe GmbH  
Postfach 10 05 04  
61145 Friedberg  
Deutschland

#### Information for Users on Disposal of Old Equipment

#### [European Union]



This symbol indicates that the electrical and electronic equipment should not be disposed as general household waste at its end-of-life. Instead, the product should be handed over to the applicable collection point for the recycling of electrical and electronic equipment for proper treatment, recovery and recycling in accordance with your national legislation.

By disposing of this product correctly, you will help to conserve natural resources and will help prevent potential negative effects on the environment and human health which could otherwise be caused by inappropriate waste handling of this product. For more information about collection point and recycling of this product, please contact your local municipal office, your household waste disposal service or the shop where you purchased the product. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

#### [Business users]

If you wish to dispose of this product, please visit our web page <http://www.jvc.eu> to obtain information about the take-back of the product.

#### [Other Countries outside the European Union]

If you wish to dispose of this product, please do so in accordance with applicable national legislation or other rules in your country for the treatment of old electrical and electronic equipment.

- This installation should be made by a qualified service person and should conform to all local codes.
- This installation shall be in accordance with the National Electrical Code, ANSI/NFPA 70. The unit is to be powered by a Listed Class 2 power supply or using the PoE.
- The AC 24 V power supply should conform to the following: Class 2 only (For USA), Isolated power supply only (For Europe and other).
- Any Mention in this manual of Alarm inputs have not been evaluated by UL to be used for Burglar Alarm Functionality.
- Special technique is required when installing this product. Please refer to your dealer for installation.
- Rating label is pasted at the bottom or top of the camera unit.
- JVC is not liable for any compensation if you drop the camera due to insecure mounting by not following the installation description. Pay careful attention during installation.
- When mounting this product to a ceiling or wall, select a location strong enough to support the weight of this camera. If the location is not strong enough to support the weight, be sure to reinforce the ceiling or wall before installation.
- The camera may drop if the mounting screws are not tightened securely. Check that the screws are tightened appropriately and securely.
- Do not install the camera near lighting fixtures of high temperature, such as spot lights. It might result in failure or fires.
- It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable program and in any literary, dramatic musical, or artistic work embodied therein.
- The latest version  
Please visit V.NETWORKS web site to check the latest firmware at <http://www3.jvckenwood.com/english/pro/networks/index.html>

#### FOR USA AND CANADA

**CAUTION**

RISK OF ELECTRIC SHOCK  
DO NOT OPEN

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

#### Information for USA

This device complies with part 15 of the FCC Rules. Changes or modifications not approved by JVC could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### CAUTION

CHANGES OR MODIFICATIONS NOT APPROVED BY JVC COULD VOID USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

# Mounting this Camera

**Note**

- Special attention is required when installing the camera to the wall or ceiling. You should not carry out installation work yourself. Ask a professional to do the job, because injuries and accidents may occur if the camera falls.
- To prevent this camera from falling, connect it to a strong section (a ceiling slab or channel) using a fall prevention wire.
- When you attach the camera body to the ceiling, be sure to wear safety goggles to protect your eyes from falling objects.

## Mounting the lens (VN-H57U/VN-H37U)

**Note**

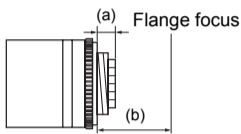
- Use a Megapixel lens only.

### 1 Check the lens mount before mounting the lens.

- The VN-H37U has the CS mount.
- The lens mount size (a) must be as shown in the table below.

Lens	Flange focus (b)	Dimension (a)
CS mount lens	12.5 mm	5.5 mm or less

- Never use a lens whose dimension (a) is more than the specified value. Otherwise, the lens may not be mounted correctly, or internal parts of the camera may be damaged. Also, the camera may fail.



### 2 Mount the lens securely by rotating it clockwise (CW).

### 3 When using a DC iris lens, connect the lens cable to the IRIS terminal at the side of this camera.

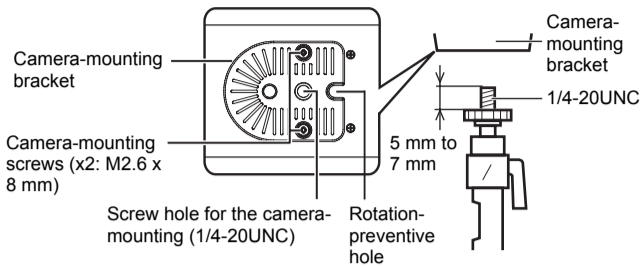
**Memo**

- You cannot use a video iris lens.
- If the lens cable plug does not match, use a 4-pin plug. [4-pin plug part number: SCV2859-001] The 4-pin plug is available from the dealer or a JVC Service Center.

## Mounting this camera onto a fixer, pan/tilt unit and similar object

When you mount the camera onto a fixer, pan/tilt unit or similar object, use the tripod screw hole (1/4-20UNC) of the camera-mounting bracket.

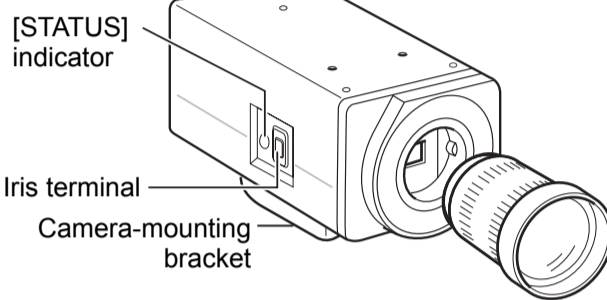
When you mount the camera on a high place, fix the fall-prevention wire to the wire attachment screw on the camera rear panel.



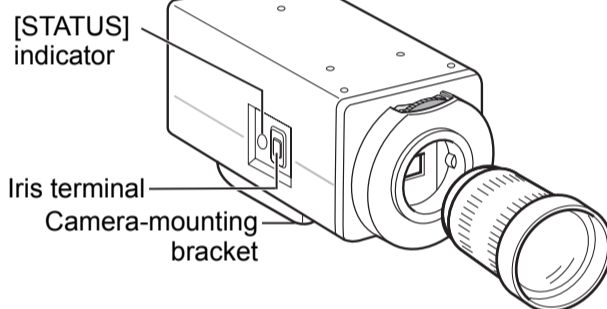
**Note**

- Tighten setscrews securely.
- Use the screws to mount the camera so that the screws protrude between 5 and 7 mm from the mounting surface. Do not use screws that exceed the specified length as it may damage the internal parts.

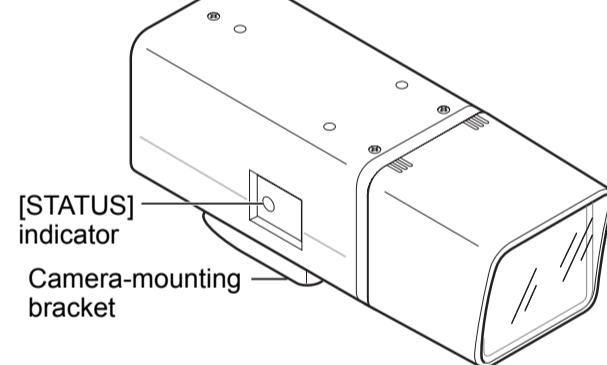
### VN-H57U



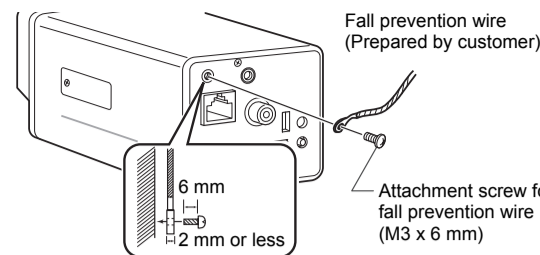
### VN-H37U



### VN-H137U



## Mounting the fall prevention wire



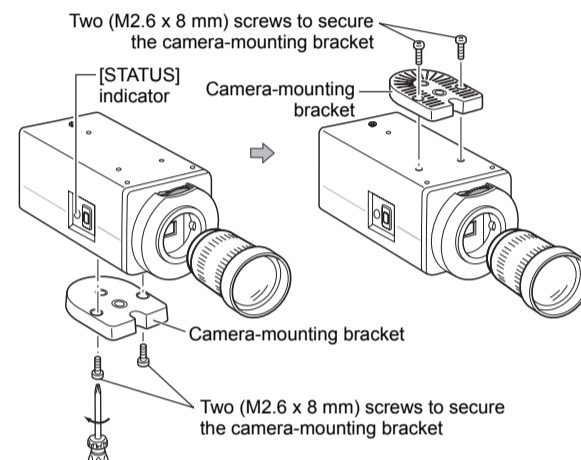
**Note**

- Take note of the length, strength and pull of the fall prevention wire. For the fall prevention wire use the insulation material. Make the wire length as short as possible. The wire must be sufficiently strong to hold the weight of the camera and the total weight of the lens and fixer. (Also, make sure that the wire ends are terminated carefully)
- Use the screws mounted on the camera rear panel to hold the fall prevention wire.
- Mount the fall prevention wire using an attachment screw for the fall prevention wire. Use the screws (M3 x 6 mm) mounted on the rear panel of the camera to hold the fall prevention wire. Do not use a screw that is longer than 6 mm as doing so may damage the inside of the camera.

## Attach the camera-mounting bracket to the top of this camera

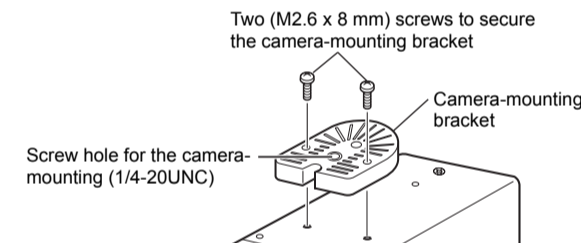
**Memo**

- The bracket is attached to the bottom of this camera before being shipped from the factory. Remove two screws for the camera-mounting bracket and attach the bracket to the top of the camera if required.



**Note**

- Use setscrews with a length of 8 mm or less to secure the camera-mounting bracket. Do not use screws that exceed the specified length as it may damage the internal parts.



# Attaching cables

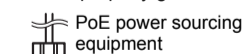
## Power Connection

### When using the PoE cable (Common)

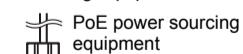
- Power is supplied via the LAN cable. Connect the PoE power sourcing equipment.
- When power is supplied, the [STATUS] indicator lights up orange on the side of this camera and lights up green after booting.

**Memo**

- You can also turn the [STATUS] indication Off when the camera is operating. For details about the settings, see "Instructions (Setting)" on the supplied CD-ROM.
- A Category-5 or higher grade cable is recommended for 100BASE-TX communication.
- Be sure to properly ground the PoE power sourcing equipment before use.



VN-H57U



VN-H37U/VN-H137U

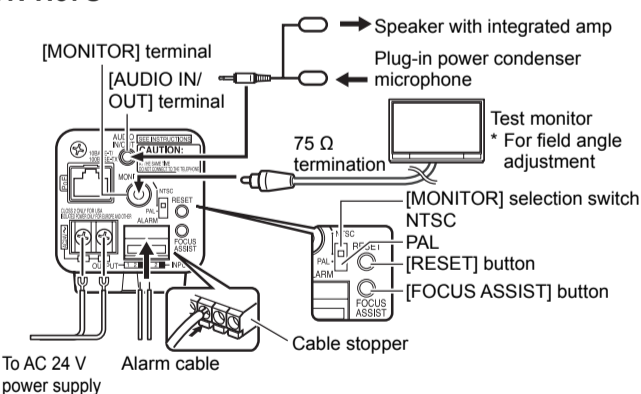
### When connecting the AC 24 V power cable (VN-H57U)

- When power is supplied, the [STATUS] indicator lights up on the camera side panel.

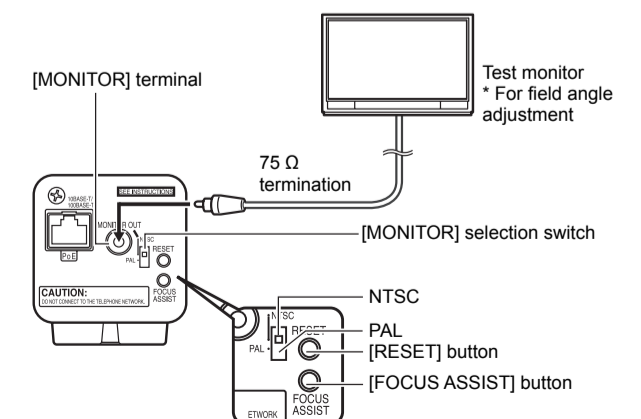
**Note**

- Always use an AC 24 V power supply that is insulated from the primary power circuit. An autotransformer or similar single-winding transformer may fail or damage the camera.
- If you use both the AC 24 V power cable and the PoE-based LAN cable simultaneously, the camera may fail. Always supply power using either method.

### VN-H57U



### VN-H37U/VN-H137U



**Memo**

- The camera has the 16:9 aspect ratio. If the test monitor for checking the image has the 4:3 aspect ratio, the camera image is converted and displayed in the 4:3 ratio.

## Connecting the monitor signal output terminal to the coaxial cable (Common)

Connect a test monitor to the [MONITOR] terminal. Use this terminal to adjust the field angle during camera setup and to adjust the focus in Focus Assist mode. Connect an RCA video cable from this MONITOR terminal to the video monitor. When using a PAL system monitor, set the [MONITOR] switch to the "PAL" position. Then, press the RESET button to restart the camera.

**Note**

- If you extend the cable, more signals attenuate, the video resolution drops, and video noise increases. A cable with lower attenuation is recommended for when the camera is attached.
- If you keep pressing the [RESET] button for more than 5s, the camera enters the Service mode. Do not press this button for more than 5s.

## Connecting the Audio cable (VN-H57U)

Connect the stereo mini jack cable to the [AUDIO IN/OUT] terminal (Φ3.5 mm). For details about the audio cable, refer to [Audio cable connection] (page 4).

## Alarm I/O Terminal Connection (VN-H57U)

**Note**

- An ambient noise source may cause a malfunction of the camera even if the cable length is 50 meters or less. In that case, keep the noise source away from the camera system.
- The cable stopper may drop from the Alarm terminal. Securely connect the cables.

## Turn on the power

After connections and installations are completed, turn on the power to the unit. When the camera is booting, the [STATUS] indicator lights up orange. It lights up green after booting.

## Image Adjustment (VN-H137U)

Adjust the field angle and the focus while checking the actual image on the monitor.

### Note

- Before you touch this camera, be sure to touch the metal surface of the monitor terminal first in order to discharge static electricity. Otherwise, static electricity may cause the camera to malfunction.

### Adjust the field angle and focus

#### 1 Remove the lens cover.

Press the lens cover marking (either A or B) up and down, release either catch, and then release another catch from this camera.

### Note

- Do not forcibly pull the lens cover. If you do so, the fall prevention sheet may be removed.
- When mounting the lens cover, be careful not to pinch the protection sheet.
- Remove the lens cover by pulling it straight, and exercise care not to hit the lens. If the lens is hit, it may be scratched by the lens cover.

#### 2 Adjust the direction of the camera.

Direct the camera at the target.

### Note

- Do not hold the lens section when adjusting the direction of the camera. The lens section may be damaged if you apply force to it.

#### 3 Adjust the field angle.

Loosen the zoom ring setscrew, and adjust the image size by rotating the zoom ring to the right or left. After completing the adjustment, move the fastening screw toward the direction of the lens (direction of the subject), and tighten the screw accordingly.

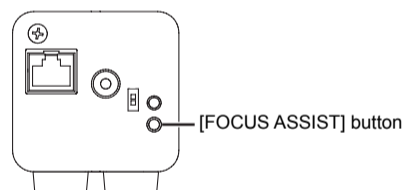
#### 4 Adjust the focus.

- 1 Lift the focusing gear control, release the catch from position C and insert it into position D to disengage the gear.
- 2 Loosen the focusing ring setscrew, and focus the image by rotating the ring to the right or left.

### Note

- If you open the gear beyond position D, the gear shaft is released from the bearing (E in the figure) to prevent it from being damaged. In this case, insert the shaft into bearing E (the original position) again and use them.

### Finely adjust the focus



#### 1 Press the [FOCUS ASSIST] button.

- The camera enters Focus Assist mode, and [STATUS] indicator flashes green and orange alternately.
- The image is sharpened with the opening of the aperture.

#### 2 Shoot the subject.

#### 3 Finely adjust the focus.

Return the catch to C from D in the diagram, and rotate the focus adjustment gear knob to adjust the focus to the optimum position.

#### 4 Fix the focusing ring.

Hold and press the focus adjustment gear between your fingers in the arrow direction of the figure, and tighten screw of focus adjusting ring.

#### 5 Release the Focus Assist mode.

- When you release the Focus Assist mode by pressing the [FOCUS ASSIST] button, the [STATUS] indicator lights in green.
- Mount the lens cover.

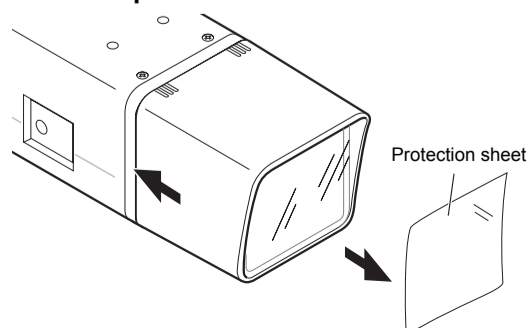
### Mount the lens cover

#### 1 Mount the lens cover.

### Note

- Mount the lens cover carefully to avoid hitting the lens. If the lens is hit, it may be scratched by the lens cover.
- Mount the lens cover securely.

#### 2 Remove the protection sheet.



## Image Adjustment (VN-H57U/VN-H37U)

Adjust the field angle and the focus while checking the actual image on the monitor.

### Note

- Before you touch this camera, be sure to touch the metal surface of the monitor terminal first in order to discharge static electricity. Otherwise, static electricity may cause the camera to malfunction.

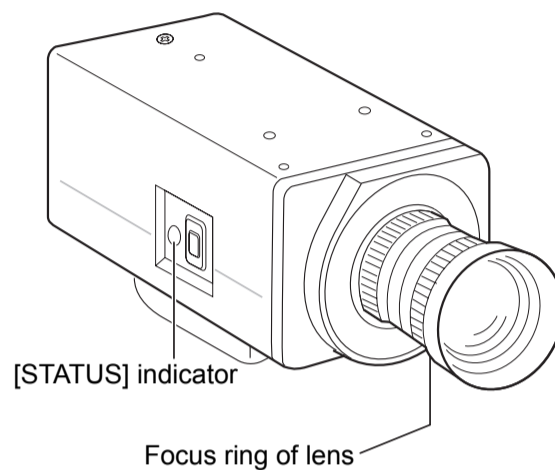
### Adjust the direction of the camera

Direct the camera at the target.

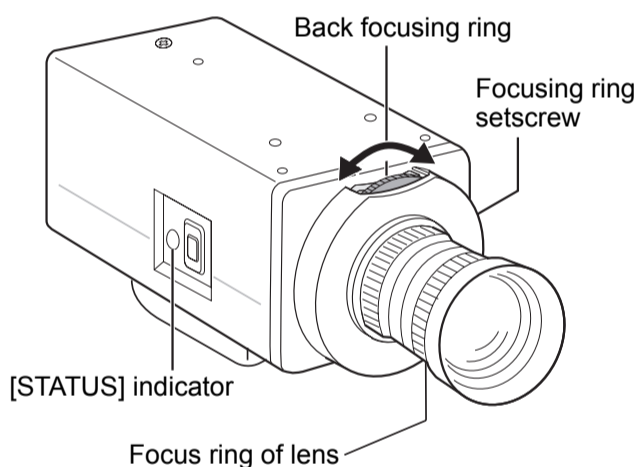
### Note

- Do not hold the lens section when adjusting the direction of the camera. The lens section may be damaged if you apply force to it.

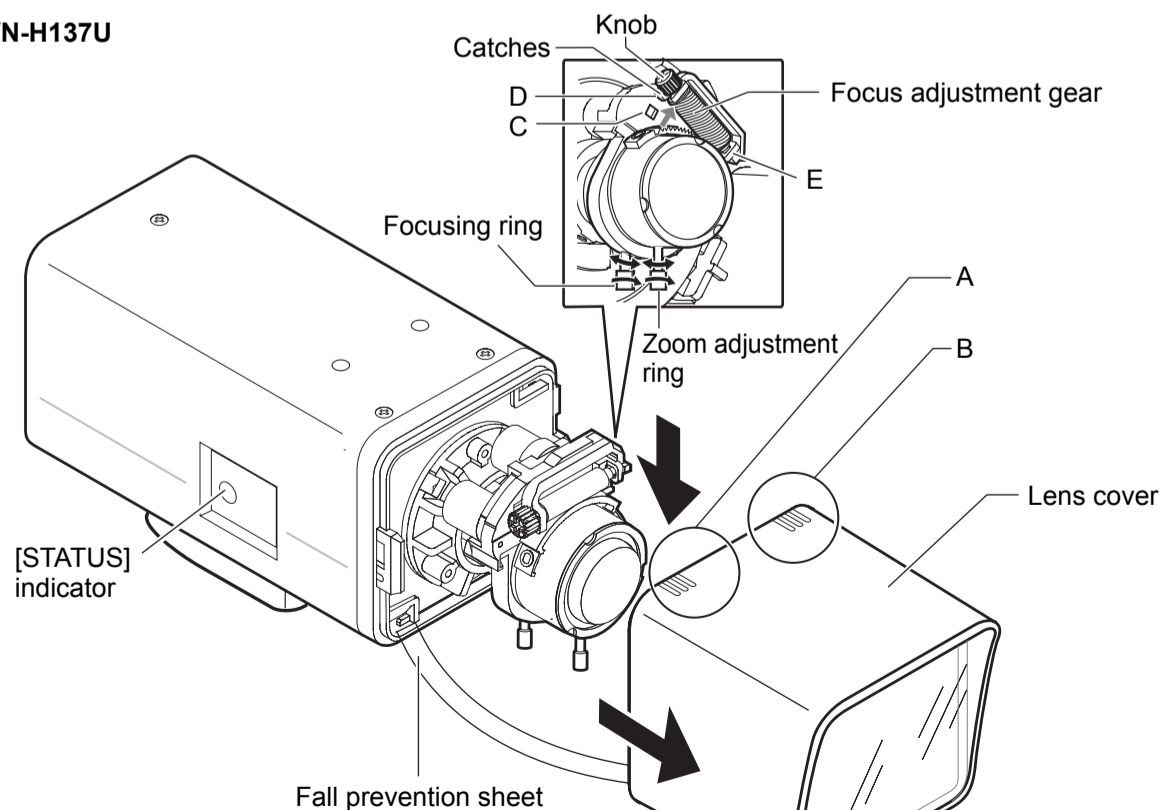
#### VN-H57U



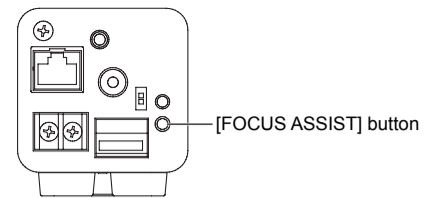
#### VN-H37U



#### VN-H137U



## Adjust the field angle and focus



#### 1 Shoot the subject and press the [FOCUS ASSIST] button.

- The camera enters Focus Assist mode, and [STATUS] indicator flashes green and orange alternately.

#### 2 Adjust the focus of the lens.

##### VN-H37U camera

- 1 Loosen the back focus setscrew using a cross slot screwdriver.
- 2 Shoot the fine designs farther than the subject you are shooting.
- 3 Connect the camera to a computer, and open the Built-in Viewer.
  - For details about computer settings and methods for connecting the camera to a computer, refer to "Instructions (IP Address Settings)".
- 4 Select "Lens Type" from the "Lens" page in "Advanced Settings".
  - For details on the lens type, refer to "Instructions (Setting)" on the supplied CD-ROM.
- 5 Adjust the back focus.

##### With a Fixed-Focus Lens

- Set the focus ring of the lens to the  $\infty$  position.
- Rotate the back focusing ring to adjust the focus.

##### With a Zoom Lens

- Zoom the lens to the tele position, and focus an image by rotating the focus ring of lens.
- Zoom the lens to the wide position, and adjust the focus by rotating the back focusing ring.

- 6 Tighten the back focus setscrews by turning them to securely fix them.

##### VN-H57U camera

- 1 Turn the lens focus ring to adjust the focus.
- 2 When you finish adjustment, secure the lens focus.
- 3 Press the [FOCUS ASSIST] button to release the Focus Assist mode.
- 4 Connect the camera to a computer, and open the Built-in Viewer.
  - For details about computer settings and methods for connecting the camera to a computer, refer to "Instructions (IP Address Settings)".
- 5 Select "Lens Type" from the "Lens" page in "Advanced Settings".
  - For details on the lens type, refer to "Instructions (Setting)" on the supplied CD-ROM.
- 6 Select "Day Focus Adjust" from the "Focus" page in "Advanced Settings".
  - The back focus position is automatically adjusted. Adjust the back focus position to finely adjust the focus.
  - For details on back focus, refer to "Instructions (Setting)" on the supplied CD-ROM.

### Note

- It may be difficult to acquire focus the following places.
  - Too bright places.
  - Too dark places.
  - Places where brightness always flickering; people are passing by
  - Places where there is little contrast
  - Places where there are repeating
- The focus position can be manually adjusted by using the Built-in Viewer installed on your computer connected to the camera. (☞ "Instructions (Setting)") Resort to this method if it is difficult to acquire focus automatically.
- If you have changed the lens after performing automatic focus adjustment, initialize the back focus position via the "Focus" page, and perform focus adjustment again from step 1.
- If you experience difficulty with automatic focusing, select "Manual Focus" from the "Focus" page, and manually adjust the focus to the optimal position.
- When using a zoom lens, focus the lens, and then select "Manual Focus" to perform focus adjustment for the zoom range.

## Cables

### Connecting the power cable to AC 24 V source (VN-H57U)

Conductor diameter (mm)	1.0 mm dia or more	1.6 mm dia or more	2.0 mm dia or more
Max cable distance (meters) (Reference value)	90	240	370

#### Note

- For safety reasons, turn on the power only after confirming that all the connections are completed.
- Be sure to turn off the camera before connecting cables.
- If you use both the AC 24 V power cable and the PoE-based LAN cable simultaneously, the camera may fail. Always supply power using either method.

### LAN cable

- When connecting to a switching hub: Use a straight cable.
- When connecting to a computer: Use a crossing cable.
- A 100-meter or less length and Category-5 or higher grade STP (shielded) cable is recommended.

#### Note

- The crossing cable may not be used for some computer models. Check the LAN specifications of the computer when you directly connect this unit to the computer.

### Alarm I/O cable (VN-H57U)

- A 50-meter or less length shielded cable is recommended.

## Audio cable connection (VN-H57U)

Connect the stereo mini jack cable ( $\Phi$  3.5).

R channel (MIC IN) : Connect to a condenser microphone that has a plug-in power system.

L channel (LINE OUT) : Connect to a speaker that has a built-in amp.

#### Note

- Always connect an external mic to the R channel only. If you plug the mic jack directly into the [AUDIO IN/OUT] terminal, a loud noise may be generated.

#### Memo

- A shielded audio cable is recommended.
- For the location to connect the audio cable, refer to [Cabling] (page 2).

## Alarm I/O cable connection (VN-H57U)

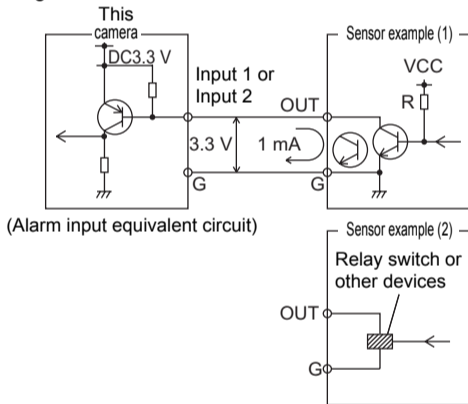
### Alarm input

Connect an infrared sensor, door sensor, metal sensor, a manual switch or other device.

- To avoid noise entering the internal circuit, enter the non-voltage contact signal in the Alarm IN terminal.
- Do not supply voltage.
- The alarm can be set to be activated during close contact (MAKE) or during open contact (BREAK) can be set from the menu.
- The alarm signal should last for at least 500 msec. If the alarm signal is short, it may not be recognized.

### Input conditions

- Connect non-voltage a contact or open collector output circuit (For details on how to set polarities, please refer to "Instructions (Settings)".)
- Low level terminal current below 1 mA
- High level terminal current 3.3 V



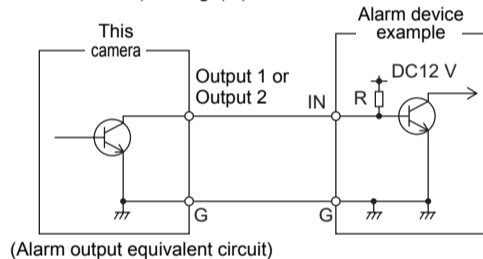
### Alarm output

Connect an alarm device, indicator, lighting, buzzer or other device.

- An alarm output signal is an open collector output. You can configure the menu to set the alarm to sound when contacts short circuit (MAKE) or when the contacts are open (BREAK). (Pressure resistance lower than 16V, 30 mA)
- This terminal has different polarities. The output voltage at the positive terminal must always be higher than the output voltage at the negative terminal. Otherwise, the circuit may be damaged.

### Output conditions

- Equivalent to NPN open collector output (For details on how to set the output logic, please refer to "Instructions (Settings)".)
- Safe excitation voltage: DC16 V or lower
- Allowable surge current: 30 mA
- Momentary (100 ms to 5000 ms) output (For details on how to set the time, please refer to "Instructions (Settings)".)



#### Note

- Connect the G terminal cable of this camera to the GND of the alarm device.

\* For connecting the Alarm I/O cable, refer to [Cabling] (page 2).

## Troubleshooting

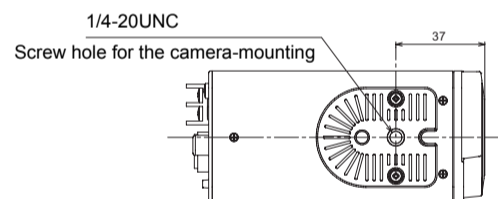
Symptom	Causes and Countermeasures
Movement of network image is not smooth	<ul style="list-style-type: none"> <li>If the monitor image output is turned ON, a lower frame rate is set for network images.</li> <li>If you turned the monitor image output to OFF, set the frame rate again. ("Instructions (Setting)" - "Internet Explorer Setting" - "Encoding Page")</li> </ul>
No monitor image is output.	The image output may be turned Off on Internet Explorer. Check the monitor output setting.
The external mic sound is not heard.	<ul style="list-style-type: none"> <li>Check the MIC connection.</li> <li>Is the audio setting turned off? ("Instructions (Setting)" - "Audio Page")</li> </ul>
Lens is out of focus	<ul style="list-style-type: none"> <li>Is the focus adjustment gear engaged? Check the location of the catch. (VN-H137U)</li> <li>Make sure that the lens is compatible with a CS mount. (VN-H57U/VN-H37U)</li> <li>After initializing the back focus position ("Instructions (Setting)" - "Focus Page"), perform focus adjustment again. (VN-H57U)</li> <li>Rotate the back focusing ring to adjust the focus. (VN-H37U)</li> </ul>

## Specifications

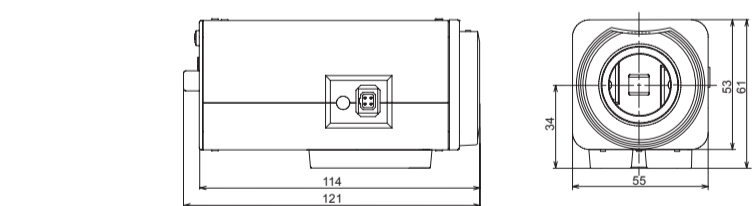
\* The specifications and appearance of this unit are subject to change for purposes of improvement without prior notice.

		VN-H57U	VN-H37U	VN-H137U
Camera section	Image sensor	1/3-inch Square-Pixel Progressive Scan CMOS (elementary color filter)		
	Effective pixels	Approximately 2,120,000 pixels 1944 (H)×1092 (V)		
	Lens mount	CS mount		
	Approved lens	Refer to our catalog.		
Minimum illuminance of subject	(F1.2, 50 % , AGC High, 1/30 s)			(50 % ,AGC High, 1/30 s)
	Color: 0.3 lx (typ.)			Color: 0.3 lx (typ.)
	Black and White : 0.03 lx (typ.)			Easy Day and Night : 0.25 lx (typ.)
Monitor output	75 $\Omega$ , 1.0 Vp-p NTSC or PAL (switch selectable)			
Audio input	Input	mini-jack ( $\Phi$ 3.5 stereo R ch), can connect to a microphone that has a plug-in power system	-	
	Reference voltage	DC2.47 V(typ.)	-	
	Impedance	2.2 k $\Omega$ (typ.)	-	
Audio output	Line OUT (200 $\Omega$ , Max 1.9 Vp-p) mini jack ( $\Phi$ 3.5 stereo L ch)		-	
Network output	Image compression format	JPEG, H.264 High Profile, H.264 Baseline Profile, MPEG-4		
	Frame size	1920 × 1080 1280 × 960 1280 × 720 640 × 480 640 × 360 320 × 240		
	Audio compression formats	$\mu$ -Law (64 kbps), AD/DA 16 bits, Fs = 8 kHz, monaural	-	
	Network interface	RJ-45 100BASE-TX/10BASE-T/FULL/HALF/Auto-negotiation enabled		
Alarm input	No-voltage a contact input, PNP open collector input, low level, latch/momentary (500 msec or longer) (1 mA circuit current at low level, and 3.3 VDC applied voltage at high level)		-	
Alarm output	NPN open collector -output (12 VDC safe excitation voltage, and 30 mA allowable sink current)		-	
Alarm record	16 MB			
Lens	Focal length	-	f = 2.8 to 10.5 mm	
	Maximum aperture ratio	-	F1.2 (f = 2.8 mm) to F2.6 (f = 10.5 mm)	
	Aperture range	-	F1.2 to F360	
	Zoom ratio	-	3.75 x	
LAN standards	Standards	Compliant with IEEE802.3, IEEE802.3u and IEEE802.3af		
	Communication protocol	TCP/IP, UDP/IP, FTP, ICMP, ARP, DHCP, SNTP, HTTP, SMTP, RTP, RTSP, IPv4, IPv6, DSCP, HTTPS, SNMP		
General	Power supply voltage	AC24 V 50 Hz/60 Hz, or PoE(DC-48 V)	PoE(DC-48 V)	
	Current consumption	AC24 V 0.5 A, or PoE 150 mA (7.2 W)	120 mA	
	Ambient temperature	-10 °C to 50 °C (Operation) 0 °C to 40 °C (Recommended)		
	Ambient humidity	20 %RH to 90 %RH (without condensation)		
	Mass	Approx. 360 g	Approx. 340 g	Approx. 390 g

### VN-H57U External dimensions (unit: mm)



### VN-H37U External dimensions (unit: mm)



### VN-H137U External dimensions (unit: mm)

